

2011308000821_PROTECTEDB_042100ZNOV11_HMCS_PRESERVER_SIGNIFICANT_INCIDENT_REPORT__INITIA.txt

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Settings\moquin.sb\Desktop\2011308000821_PROTECTEDB_042100ZNOV11_HMCS_PRESERVER_SIGN
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Saved At: 071210ZNOV11
Saved By: CIV MOQUIN, SB

OAAKZYUW RCEOCEA5144 3082129-KKKK--RCEOCEA RCEMFXA.

ZNY KKKKK

O R 042100Z NOV 11

FM HMCS PRESERVER

TO RCEOCEA/MARLANTHQ HALIFAX//N00/N02/N02FES/N02PA//

INFO RCEMFXA/COMCANFLTANT

RCEOCEA/MOC HALIFAX

BT

PROTECTED B

SIC Y2A

SUBJ: SIGNIFICANT INCIDENT REPORT - INITIAL

REFS: A. DAOD 2008-3

B. MARLANTORD 4-13

1. DATE/TIME LOCATION OF INCIDENT: 4 NOV 2011, 1432, 44.40.13N
063.35.65W

2. PARTICULARS: PRE IMPACTED IRVING SHIPYARD DRYDOCK NOVA DOCK

3. DESCRIPTION: PRE CONDUCTING COURSE ALTERATION TO STBD FROM 110 TO
139. MIDSHIPS ORDERED THEN 15 DEGREES PORT COUNTER HELM ORDERED.
SHIPS HEAD CONTINUED PAYING OFF TO STBD. FULL PORT HELM AND PORT
THRUST WAS SUBSEQUENTLY ORDERED. SHIPS HEAD CONTINUED PAYING OFF TO
STBD. MAIN ENGINE WAS STOPPED AND 40 REVS ASTERN WERE ORDERED,
FOLLOWED BY 60 REVS ASTERN, THEN FULL ASTERN PROPULSION. SHIPS
COMPANY BRACED FOR SHOCK, PIPED AT 1431 AND AT 1432 PRE COLLIDED
WITH IRVING SHIPYARD DRYDOCK. AT 1433, PRE COLLIDED AGAIN WITH
DRYDOCK BEING CONTINUALLY SET BY WIND AND EBB TIDE. RAPID SURVEY WAS
COMMENCED AT 1441. RAPID SURVEY COMPLETED WITH NO INGRESS OF WATER
DISCOVERED. LIQUID LVLS STATIC. EXTERNAL DMG APPEARS TO BE LIMITED
TO FWD FRM 60. SOME EXTERIOR STRUCTURAL DMG NOTED. FMF CURRENTLY
ASSESSING

4. POSSIBLE BROADER IMPLICATIONS OF INCIDENT: PRE MAY HAVE SUFFERED
DMG NOT DISCOVERED ON RAPID SURVEY, WILL NEED FURTHER DMG
ASSESSMENT. FDU ON SCENE CONDUCTING EVALUATION TO DETERMINE BELOW
WATERLINE DMG. DMG TO NOVA DOCK UKN HOWEVER EXTERNAL LADDERS BOTH
IMPACTED AND SMALL PERFORATION OBS.

5. RECOMMENDATIONS: FURTHER DMG ASSESSMENT, AND REQUIRED REPAIRS
BEING EVALUATED.

6. ACTUAL AND PROBABLE MEDIA INTEREST: HIGH GIVEN RECENT NSBS
ANNOUNCEMENT

7. HMCS PRESERVER, NF 4/5, 902-427-2795,

8. MISC INFO/INTENTIONS: INTEND UPDATE UPON FURTHER DMG ASSESSMENT
IN SEPCOR

BT

#5144

DRAFTER: LAMER, RJC CIV 427-6071

RELEASER: LAMER, RJC CIV 427-6071

RELEASER ADDR: /COMMFAC HALIFAX//SERVICE DESK//

DISTRIBUTION

COMCANFLTANT

TASK GROUP

*** OPI

CCFL DOMINO

CFLTHQ

MOG5HQ

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COMMFAC HALIFAX SERVICE DESK *** OPI

MARLANT N02 *** OPI
N00
N00 HARDCOPY OFFICE
N02FES
N02PA
N3
N31
TN3

SHIPS IN PORT HMCS PRESERVER *** OPI
HMCS PRESERVER DOMINO
SHIPSINPORT_COMFAC_GUARD

ANNOTATIONS

042129ZNOV11 SYSTEM
MSN: 2011308000821 was forwarded to Office: HMCS PRESERVER DOMINO from Office: HMCS PRESERVER for Organization: SHIPS IN PORT.042129ZNOV11 SYSTEM
MSN: 2011308000821 was forwarded to Office: SHIPSINPORT_COMFAC_GUARD from Office: HMCS PRESERVER for Organization: SHIPS IN PORT.042129ZNOV11 SYSTEM
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PROTECTED E

01 03 071212Z NOV 11 OO KKKK

N02ASC118/11

MARLANTHQ HALIFAX//N02 FES//

NDHQ CMS OTTAWA//COS/EA//

NDHQ DGMC OTTAWA//DMCA2//

PROTECTED B N02ASC118/11

SIC Y2A

SUBJ: COLLISION HMCS PRESERVER - INITIAL REPORT

PLEASE ENSURE THAT THIS MESSAGE IS DELIVERED TO THE EXECUTIVE
ASSISTANT TO THE CMS

THE FOLLOWING MESSAGE WAS RECEIVED BY THIS OFFICE FROM HMCS
PRESERVER (DTG: 042100Z NOV 11)

REFS: A. DAOD 2008-3

B. MARLANTORD 4-13

1. DATE/TIME LOCATION OF INCIDENT: 4 NOV 2011, 1432, 44.40.13N
063.35.65W

2. PARTICULARS: PRE IMPACTED IRVING SHIPYARD DRYDOCK NOVA DOCK

3. DESCRIPTION: PRE CONDUCTING COURSE ALTERATION TO STBD FROM 110 TO
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THRUST WAS SUBSEQUENTLY ORDERED. SHIPS HEAD CONTINUED PAYING OFF TO

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PROTECTED B

02 03

KKKK

N02ASC118/11

STBD. MAIN ENGINE WAS STOPPED AND 40 REVS ASTERN WERE ORDERED, FOLLOWED BY 60 REVS ASTERN, THEN FULL ASTERN PROPULSION. SHIPS COMPANY BRACED FOR SHOCK, PIPED AT 1431 AND AT 1432 PRE COLLIDED WITH IRVING SHIPYARD DRYDOCK. AT 1433, PRE COLLIDED AGAIN WITH DRYDOCK BEING CONTINUALLY SET BY WIND AND EBB TIDE. RAPID SURVEY WAS COMMENCED AT 1441. RAPID SURVEY COMPLETED WITH NO INGRESS OF WATER DISCOVERED. LIQUID LVLS STATIC. EXTERNAL DMG APPEARS TO BE LIMITED TO FWD FRM 60. SOME EXTERIOR STRUCTURAL DMG NOTED. FMF CURRENTLY ASSESSING

4. POSSIBLE BROADER IMPLICATIONS OF INCIDENT: PRE MAY HAVE SUFFERED DMG NOT DISCOVERED ON RAPID SURVEY, WILL NEED FURTHER DMG ASSESSMENT. FDU ON SCENE CONDUCTING EVALUATION TO DETERMINE BELOW WATERLINE DMG. DMG TO NOVA DOCK UKN HOWEVER EXTERNAL LADDERS BOTH IMPACTED AND SMALL PERFORATION OBS.

5. RECOMMENDATIONS: FURTHER DMG ASSESSMENT, AND REQUIRED REPAIRS BEING EVALUATED.

6. ACTUAL AND PROBABLE MEDIA INTEREST: HIGH GIVEN RECENT NSBS ANNOUNCEMENT

7. HMCS PRESERVER, NF 4/5, 902-427-2795,

PROTECTED B

A0344594_4-000004

PROTECTED B

03 03

KKKK

N02ASC118/11

8. MISC INFO/INTENTIONS: INTEND UPDATE UPON FURTHER DMG ASSESSMENT
IN SEPCOR

Sue Moquin

S.B. MOQUIN N02 ASC 427-1548

T.N. BROCKWAY N02 FES 427-6352

PROTECTED B

A0344594_5-000005

Bow repair notification:

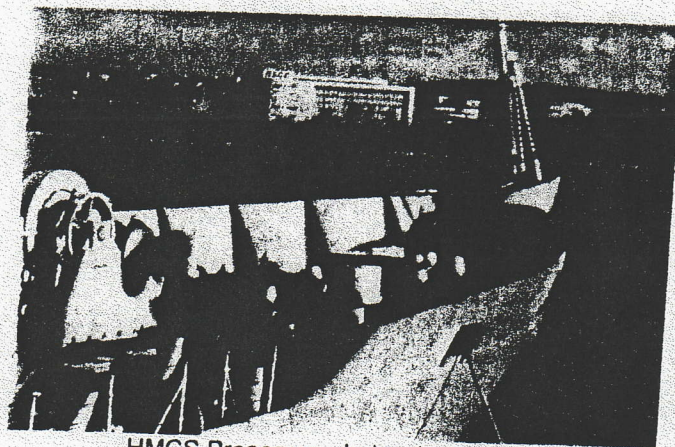
15010012 INVESTIGATE DAMAGE TO BOW

Order #	820161471	820161573
External Services	\$67,611.05	\$22,104.38
Internal Labour	\$82,059.75	\$276,063.18
Material	\$31,361.39	\$18,118.03
Other	\$46.65	\$77.91
SBTL	\$181,078.84	\$316,363.50
		\$497,442.34 TOTAL

"The cost to perform this repair work is funded from the normal 2nd Level engineering and maintenance support provided by FMF Cape Scott to the MARLANT Fleet"

HULL SURVEY SHEET FOR		DISTRIBUTION LIST	
HMCS Preserver		CDTL - original copy	
COMPONENT STRUCTURE		ENG/NAO/Hull Survey Office - file copy	
		LOCATION	FORE PEAK
		Fore Peak - FR10	01, 1
		FRAME	DECK
			STBD SIDE
JUSTIFICATION FOR SURVEY			
1. Survey and prepare repair instructions for damage to bow.			
REF: FMFCS Job No. 820161471		REF DWG NO.: 509-H26-21228, 509-H26-21234, 509-H26-21237	
DESCRIPTION OF WORK REQUIRED			

1. A structural survey to investigate collision damage to the bow of HMCS Preserver was conducted on November 7 to 11, 2011 by DEA Hull Surveyors with the following results.
2. The Bulwarks on STARBOARD side are bent and distorted, including all bulwark stanchions from Frame 10 to bow, and also distortion to forward bulwarks on Port side, with two stanchions exhibiting damage. The plating on 01 Deck is exhibiting local deformation where all bulwark stanchions are attached. There is some deformation to the shear strake on STBD side forward of Frame 10, and also shell is holed at 1 Deck Frame E.



HMCS Preserver - bulwark damage.

3. The following are the repairs for the bulwarks:
 - a. Crop and remove eight (8) bulwark stanchions from Stbd Frame 10 to Port Frame J (one bulwark from bow) including landing and flat.
 - b. Fabricate and install all new bulwark stanchions in way of removals. Pattern can be taken from port side. Also refer to reference drawings and removed sections. Allow additional material (1.5") on bottom end of new bulwarks to facilitate fitting to original locations that now exhibit acceptable deformation in 01 Deck plating.

Material required:

8 pcs of 4' x 8' x 7/16" Plate CSA G40.21-M 260WT Cat 2, or equivalent grade.
(4'x8' plates allow each bulwark to be made in a single piece)

HULL SURVEYOR		APPROVED BY:	HI REPORT NO.: HS110443
FRED WALTERS	PH 427-1490	PHONE:	REVISION: 0
SURVEY DATE:	14 NOV 2011		SURVEY SHEET NO.: 1
EXPIRY DATE:	N/A		PAGE 1 OF 13

HULL SURVEY SHEET FOR		DISTRIBUTION LIST	
HMCS Preserver		CDTL - original copy	
COMPONENT STRUCTURE		ENG/NAO/Hull Survey Office - file copy	
		LOCATION	FORE PEAK
		Fore Peak - FR10	01, 1
		FRAME	DECK
			STBD SIDE
JUSTIFICATION FOR SURVEY			
1. Survey and prepare repair instructions for damage to bow.			
REF: FMFCS Job No. 820161471		REF DWG NO: 509-H26-21228, 509-H26-21234, 509-H26-21237	
DESCRIPTION OF WORK REQUIRED			

Note Stanchions to be reinstalled after all deck and shell structural repairs have been completed.

- c. Crop and remove bulwark plating from Stbd Frame 10 to weld seam located near Port Frame J - aft of first bulwark from bow, including all bow section plating.
- d. Port side bulwark stanchion located at Frame J (torn away from deck plating). Scale area in way of broken weld and conduct MT NDE testing to capture full extent for fracture. Remove the weld fracture from one (1) side by grinding/gouging no more than 75% of base metal and prepared for welding. Bulwark to be faired from existing position to correct any side deflection that exists, and returned to its original shape. Weld stanchion to 01 deck from one side once bulwark position has been corrected and confirmed. Repeat the weld procedure from the opposite side to ensure a complete joint penetration weld upon completion. All prepared areas are to be 100% examined using MT NDE to ensure fracture is completely removed, fill excavated areas with steel weld until a full 1/4" fillet is achieved. Affected areas are to be 100% inspected using visual and MT NDE methods of inspection a minimum of 24 hours upon completion of weld repairs. Note: Repairs to underlying deck beam are to be completed prior to these bulwark repairs.
- e. Fabricate, fit and install all new bulwark plating in way of removals. Bulwark plating not to be installed until all repairs to side shell plating have been determined and completed. Renew approximately 40 linear feet of bulwark top rail. If original bulb shape material is not obtainable, top rail may be fabricated in shop using similar size material. Alternative rail design to be approved by Hull Survey office prior to fabrication.

Material required:

- 3 pcs. of 6' x 12' x 7/16" Plate CSA G40.21-M 260WT Cat 2.
- 4 pcs. of 6' x 12' x 3/8" Plate CSA G40.21-M 260WT Cat 2.
- * (Note: All Plate listed above is to have 6' minimum width for fabrication purposes.)
- 1 pc. of 4'x8' x 1/2" Plate CSA G40.21-M 260WT Cat 2.
- 40 linear feet of 9" x 0.40" OSBP - one side bulb plate - no grade specified depending on availability.
(bulb plate May be available from Irving Shipbuilding Ltd, Halifax)

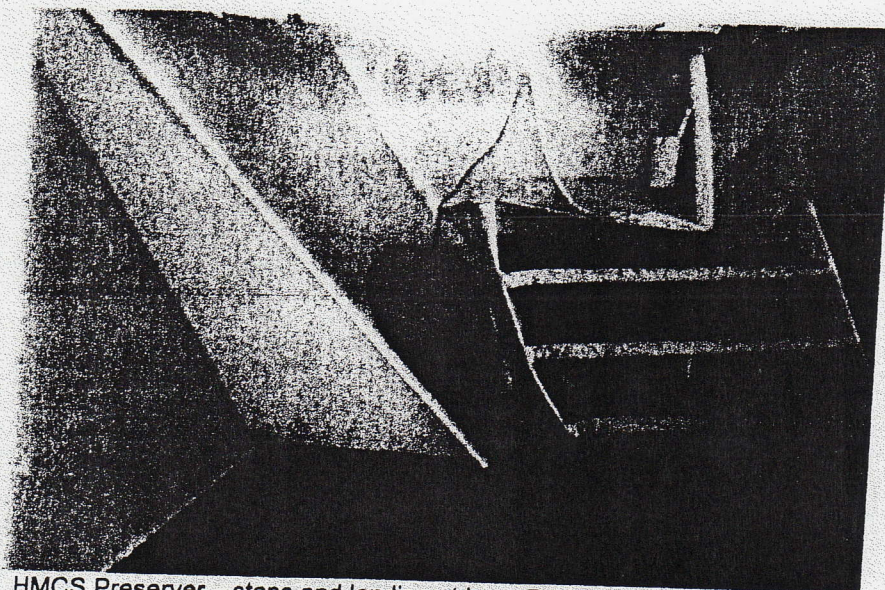
- 4. Bow Platform and steps located at bow of ship is bent and distorted. Fabricate new as per original configuration.

Material required:

- 1 sheet 4' x 8' x 1/4" plate
- 1 sheet 4' x 8' x 1/4" checkered plate
- 1 pc 20 ft. length 2 x 2 x 1/4" OA
- 2 pcs 20' length 1/4 x 3" Flat bar

HULL SURVEYOR		APPROVED BY:	HI REPORT NO.: HS110443
FRED WALTERS PH 427-1490		PHONE:	REVISION: 0
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EXPIRY DATE:	N/A		PAGE 2 OF 13

HULL SURVEY SHEET FOR		DISTRIBUTION LIST	
HMCS Preserver		CDTL - original copy	
COMPONENT STRUCTURE		ENG/NAO/Hull Survey Office - file copy	
		LOCATION	FORE PEAK
		Fore Peak - FR10	01, 1
		FRAME	DECK
			STBD SIDE
JUSTIFICATION FOR SURVEY			
1. Survey and prepare repair instructions for damage to bow.			
REF: FMFCS Job No. 820161471		REF DWG NO.: 509-H26-21228, 509-H26-21234, 509-H26-21237	
DESCRIPTION OF WORK REQUIRED			



HMCS Preserver - steps and landing at bow, Port side bulwark stanchion.

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		Fore Peak - FR10	01, 1
		FRAME	DECK
			STBD SIDE
JUSTIFICATION FOR SURVEY			
1. Survey and prepare repair instructions for damage to bow.			
REF: FMFCS Job No. 820161471		REF DWG NO.: 509-H26-21228, 509-H26-21234, 509-H26-21237	
DESCRIPTION OF WORK REQUIRED			

5. The mounting structure for the anchor catting fairlead is damaged and distorted, with the fairlead block sheared off at bolts. Fabricate, fit and install catting fairlead as per existing. Pattern can be taken from existing mount on port side. Drawing 509-H26-21237 Sheet 2 refers to Plan No. 204/1.



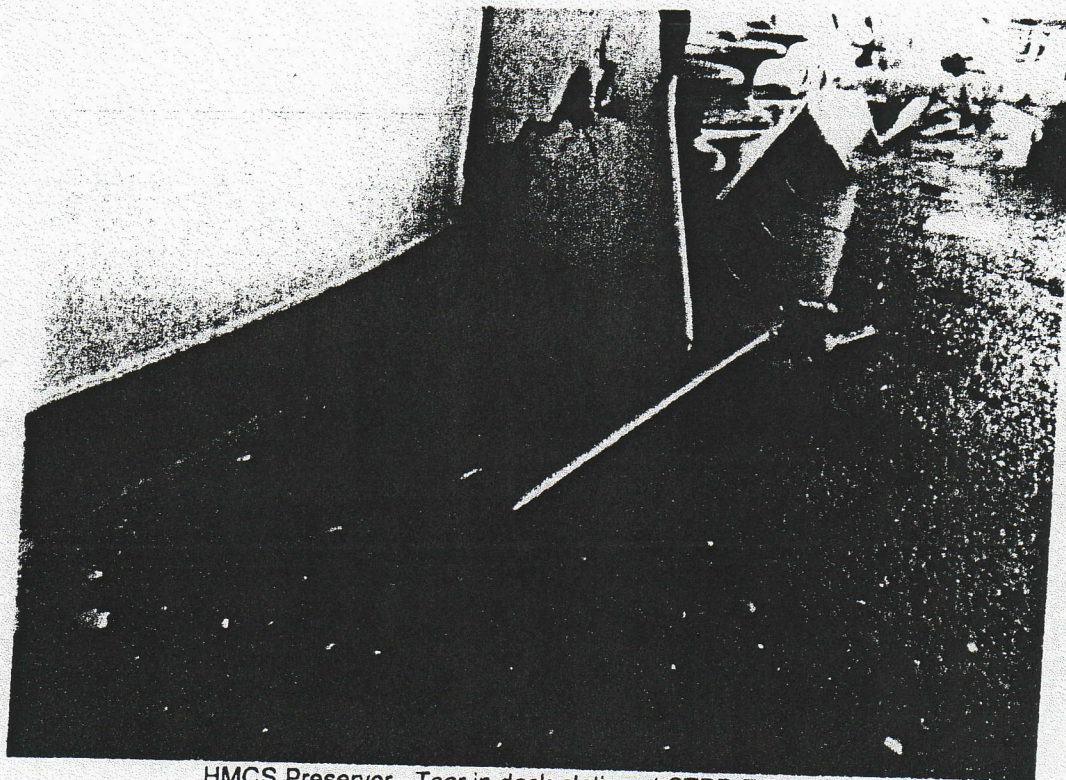
Material required:

1 sheet 4' x 8' x 5/8" plate CSA G40.21-M 260WT Cat 5 (21J @ -40 deg. C)
 Catting Fairlead head - <http://www.smithberger.com/productsbm.htm>

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EXPIRY DATE:	N/A		PAGE 4 OF 13

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		FRAME	DECK
			STBD SIDE
JUSTIFICATION FOR SURVEY			
1. Survey and prepare repair instructions for damage to bow.			
REF: FMFCS Job No. 820161471		REF DWG NO.: 509-H26-21228, 509-H26-21234, 509-H26-21237	
DESCRIPTION OF WORK REQUIRED			

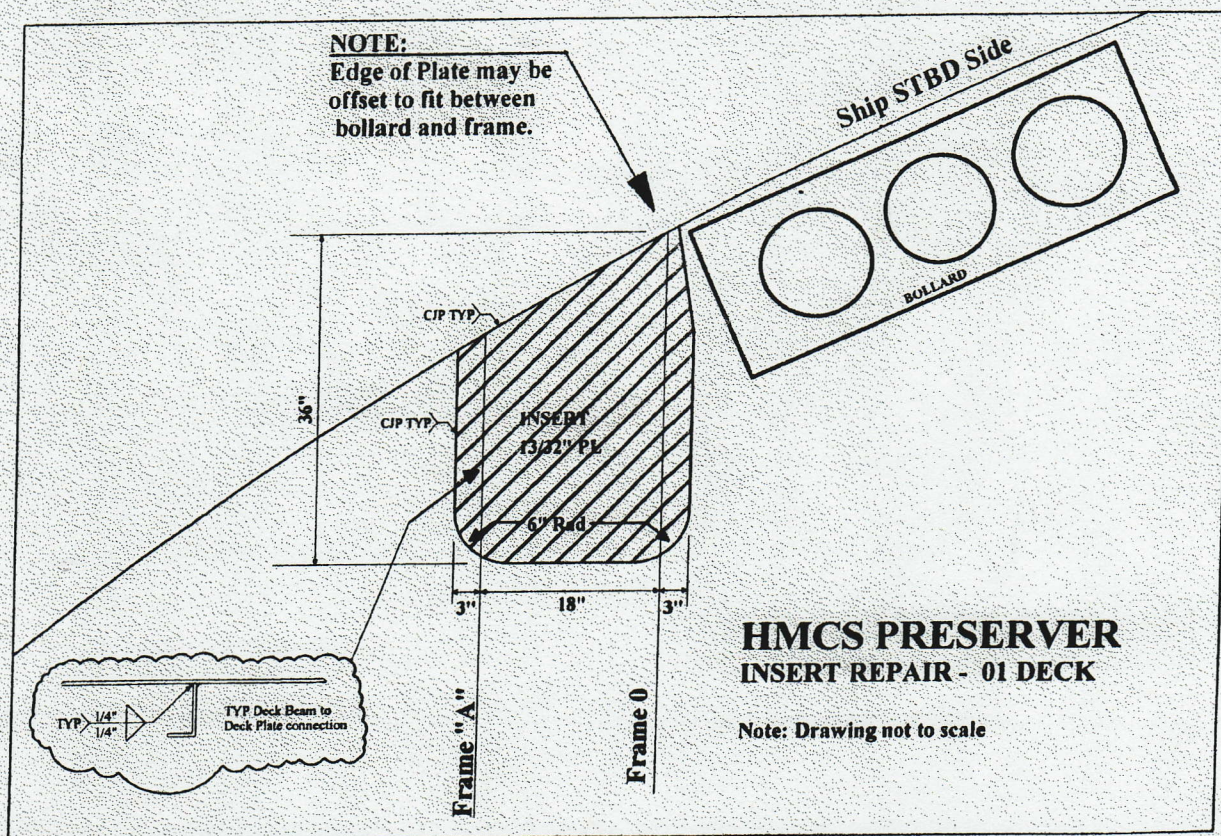
6. The deck plating on 01 Deck, at Frame 0, STBD side is torn, exhibiting an opening to Bos'n Workshop located below. Crop and remove section of deck plating beginning at 3" forward of Frame A to 24" Aft (3" aft of Frame 0), from ship side inboard a distance of 36" at Frame 0, ensuring that full extent of torn deck plating has been removed through NDE inspection. If insert size increase is required, contact Hull Surveyor to determine additional work required. Supply, fit and install new section of deck plating as per sketch.



HMCS Preserver - Tear in deck plating at STBD Frame 0

HULL SURVEYOR		APPROVED BY:	HI REPORT NO.: HS110443
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COMPONENT STRUCTURE		ENG/NAO/Hull Survey Office - file copy	
		LOCATION	FORE PEAK
		Fore Peak - FR10	01, 1
		FRAME	DECK
			STBD SIDE
JUSTIFICATION FOR SURVEY			
1. Survey and prepare repair instructions for damage to bow.			
REF: FMFCS Job No. 820161471		REF DWG NO: 509-H26-21228, 509-H26-21234, 509-H26-21237	
DESCRIPTION OF WORK REQUIRED			



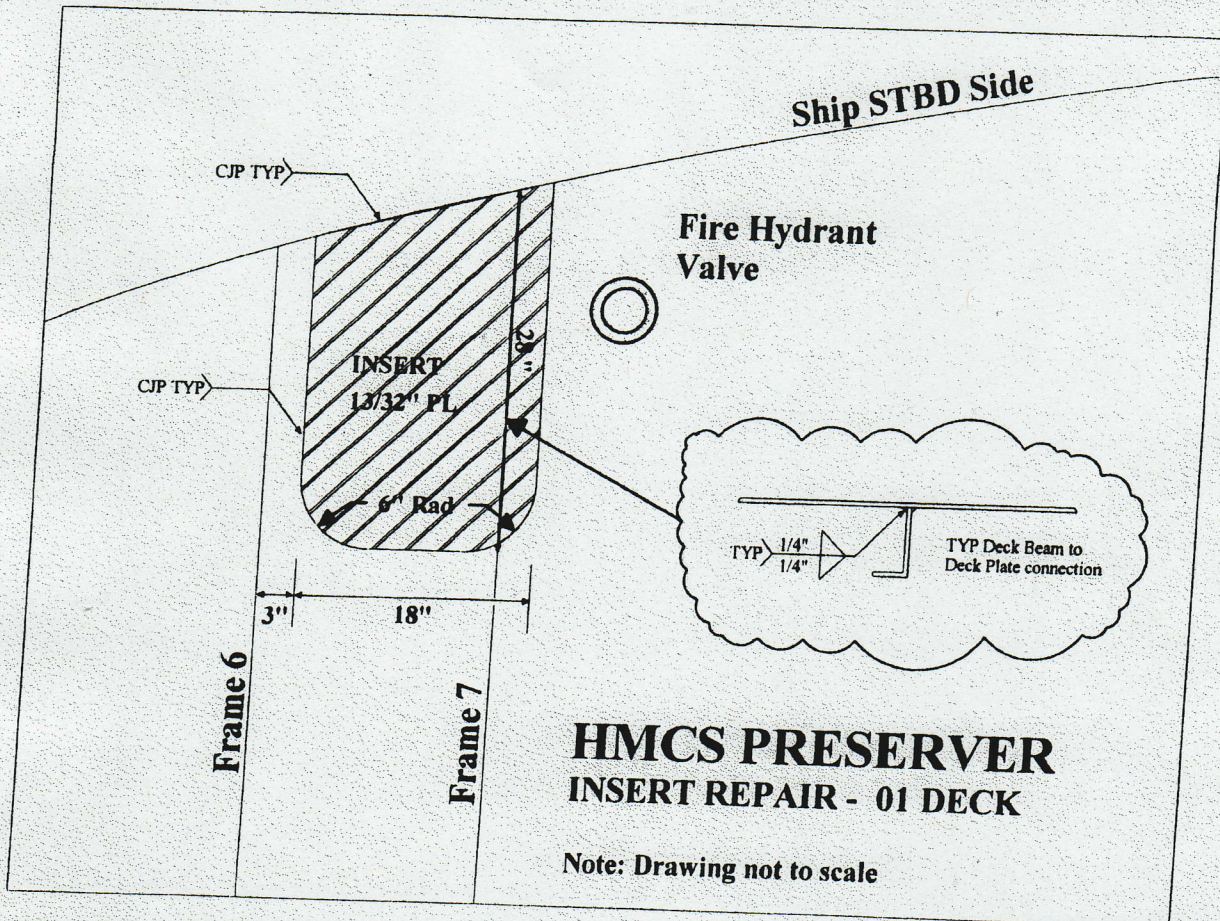
Material required:

6 sq. ft. (24" x 36") of 13/32" plate CSA G40.21-M 260WT Cat 5 (21J @ -40 deg. C)

7. The deck plating on 01 Deck, at Frame 7, STBD side is exhibiting deformation beyond acceptable limits in two planes. Insert in deck plating required. Crop and remove section of deck plating beginning at 3" AFT of Frame 6 to 18" Aft (3" aft of Frame 7), from ship side inboard a distance of 28" at Frame 7. Supply, fit and install new section of deck plating as per sketch.

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FRED WALTERS PH 427-1490		PHONE:	REVISION: 0
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		FRAME	DECK
			STBD SIDE
JUSTIFICATION FOR SURVEY			
1. Survey and prepare repair instructions for damage to bow.			
REF: FMFCS Job No. 820161471		REF DWG NO.: 509-H26-21228, 509-H26-21234, 509-H26-21237	
DESCRIPTION OF WORK REQUIRED			



Material required:

6 sq. ft. (18" x 28") of 13/32" plate CSA G40.21-M 260WT Cat 5 (21J @ -40 deg. C)

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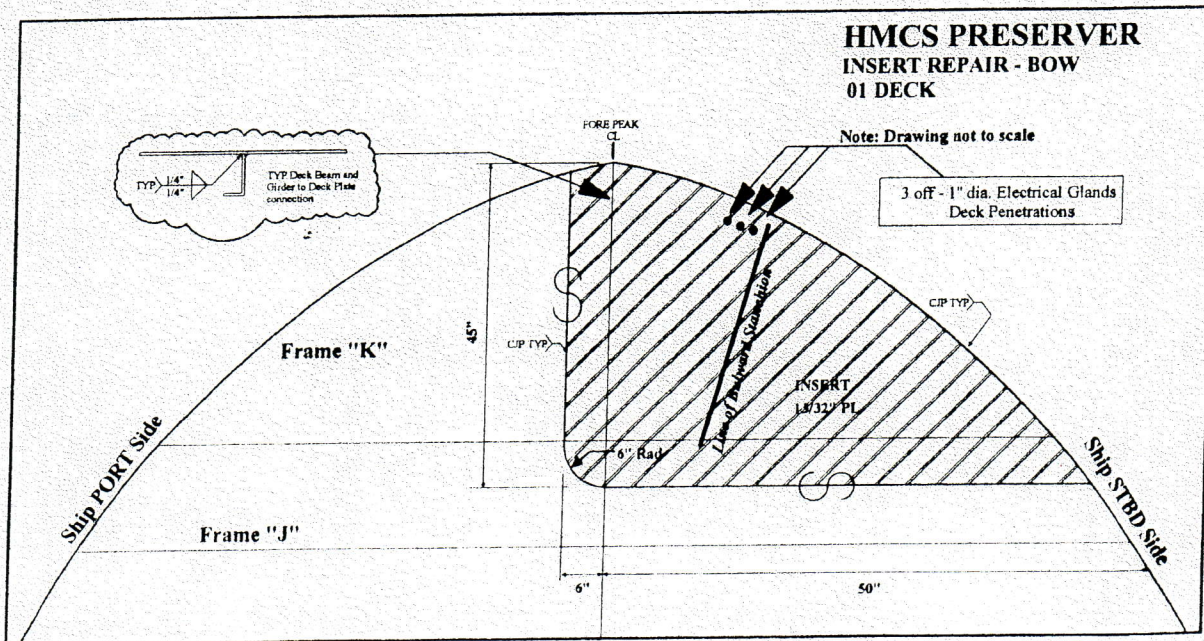
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		FRAME	DECK
			STBD SIDE
JUSTIFICATION FOR SURVEY			
1. Survey and prepare repair instructions for damage to bow.			
REF: FMFCS Job No. 820161471		REF DWG NO.: 509-H26-21228, 509-H26-21234, 509-H26-21237	
DESCRIPTION OF WORK REQUIRED			

8. The deck plating on 01 Deck, at Forward peak of bow back to aft of Frame "J" is exhibiting deformation on starboard side in way of bulwark stanchion attachment location. Insert in deck plating required. Crop and remove section of deck plating beginning at forwardmost of bow to 45" Aft (3" aft of Frame station K), from ship side inboard a distance to 56", ending 6" to port side of centerline girder. Supply, fit and install new section of deck plating as per sketch. Supply, fit and install three (3) electrical glands as per existing arrangement.

NOTE : Weld joint of deck plating to shell plating is a to have a prepared edge on the deck plating to give a Complete Joint Penetration weld, and not to be double fillet weld.

Material required:

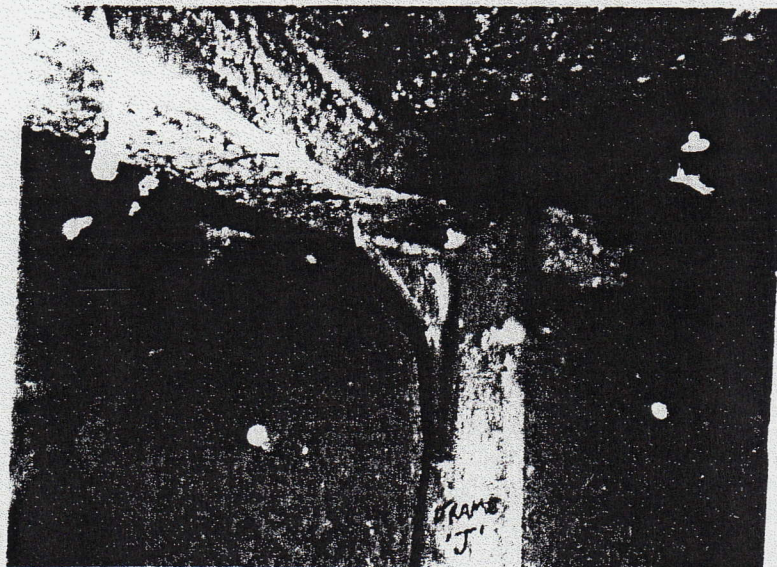
20 sq. ft. (45" x 56") of 13/32" plate CSA G40.21-M 260WT Cat 5 (21J @ -40 deg. C)



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		FRAME	DECK
			STBD SIDE
JUSTIFICATION FOR SURVEY			
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REF: FMFCS Job No. 820161471		REF DWG NO.: 509-H26-21228, 509-H26-21234, 509-H26-21237	
DESCRIPTION OF WORK REQUIRED			

9. The deck beams and brackets connecting 01 DECK beams to STARBOARD side frames are "tripped" and distorted in the following locations:
- a. STBD - Frame 10
 - b. STBD - Frame 7
 - c. STBD - Frame 0
 - d. STBD - Frame E
 - e. STBD - Frame F
 - f. PORT - Frame F
 - g. STBD/PORT at Frame J - this deck beam tripped on both ends and in middle. Full replacement of deck beam required, complete with two (2) brackets. Deck beam may be installed in two pieces with one butt joint off centre at 30 degree angle.



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FRED WALTERS PH 427-1490		PHONE:	REVISION: 0
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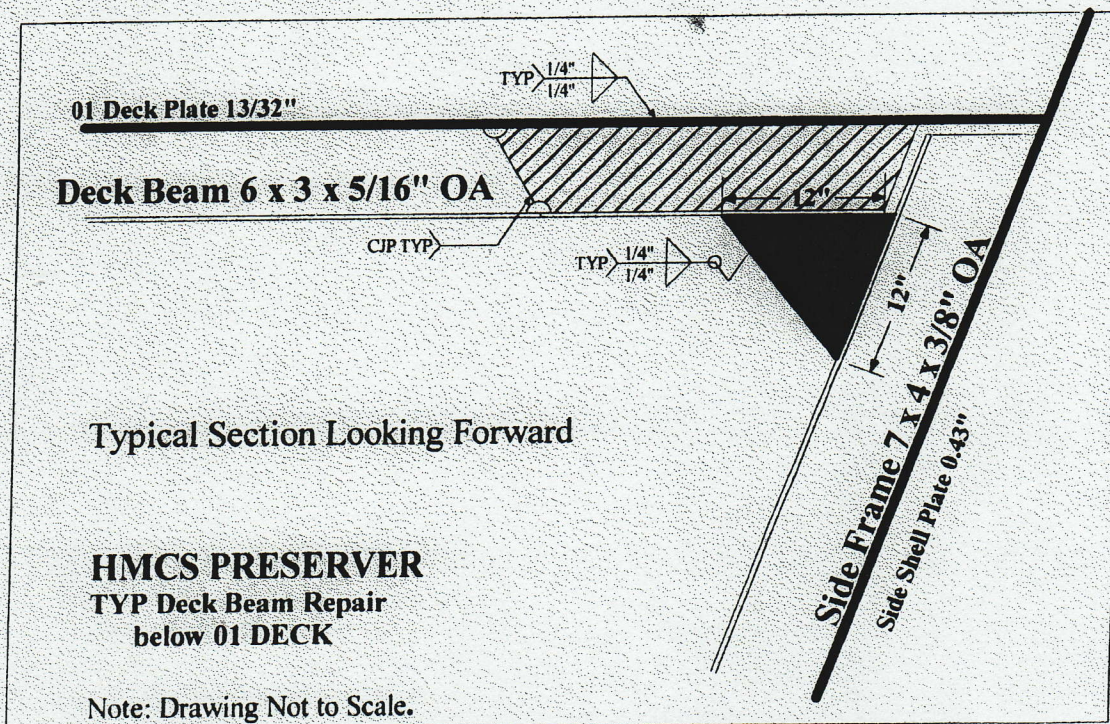
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		LOCATION	FORE PEAK
		Fore Peak - FR10	01, 1
		FRAME	DECK
			STBD SIDE
JUSTIFICATION FOR SURVEY			
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REF: FMFCS Job No. 820161471		REF DWG NO. 509-H26-21228, 509-H26-21234, 509-H26-21237	
DESCRIPTION OF WORK REQUIRED			

HMCS Preserver - Deck beam and bracket distortion.

- h. Repair tripped deck beams by cropping distorted sections and replace with new steel shape, and fabricate and install new brackets. See attached sketch.

Material required:

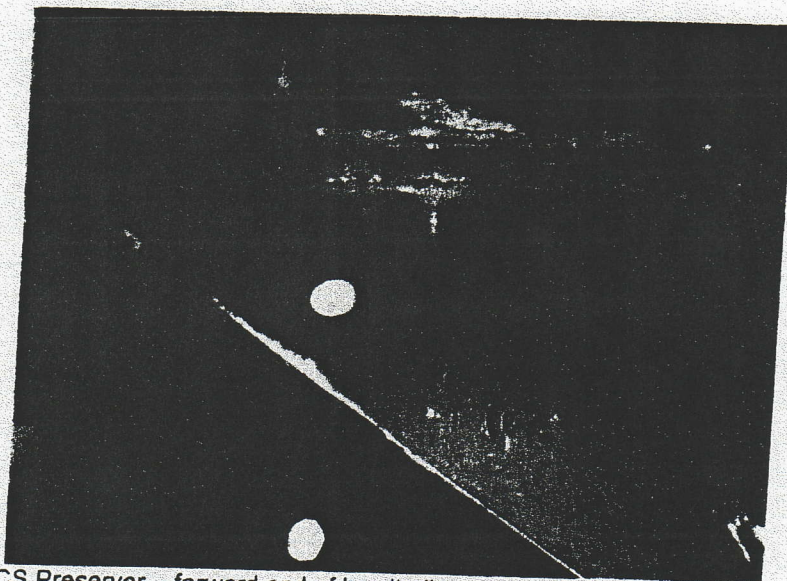
- 1 sheet 4' x 8' x 13/32" plate CSA G40.21-M 260WT Cat 5 (21J @ -40 deg. C)
2 pieces of 20' length 6 x 3 x 5/16" IA angle



HULL SURVEYOR		APPROVED BY:	HI REPORT NO.: HS110443
FRED WALTERS PH 427-1490		PHONE:	REVISION: 0
SURVEY DATE:	14 NOV 2011		SURVEY SHEET NO.: 1
EXPIRY DATE:	N/A		PAGE 10 OF 13

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			STBD SIDE
JUSTIFICATION FOR SURVEY			
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REF: FMFCS Job No. 820161471		REF DWG NO.: 509-H26-21228, 509-H26-21234, 509-H26-21237	
DESCRIPTION OF WORK REQUIRED			

10. The longitudinal girder located Starboard side underneath 01 Deck is exhibiting fractures in the welded joint to 01 Deck in way of Frame "D". Scale area of weld, both sides to determine extent of fractures. Remove the weld fracture from one (1) side by gouging no more than 75% of base metal and prepared for welding. If the fracture completely penetrates to the opposite side, repeat this procedure from the opposite side to ensure a complete joint penetration weld upon completion. All prepared areas are to be 100% examined using MT NDE to ensure fracture is completely removed, and fill excavated areas with steel weld until a full 5/32" fillet is achieved. Affected areas are to be 100% inspected using visual and MPI methods of inspection a minimum of 24 hours upon completion of weld repairs.



HMCS Preserver - forward end of longitudinal girder 01 Deck Stbd Frame D.

11. The Pre Wet system for 01 Deck has sustained damage with at least one broken pipe from nozzle, 01 Deck Frame "D" centerline, and a second missing nozzle/deck fitting with a wooden plug in deck hole and underneath piping flanged and capped at 01 Deck between Frames 1 and 2. Fabricate and install new steel flange ring to underside of 01 deck for nozzle mounting.

Recommend that FMF/Mechanical engineering section investigate and report on status of pre wet system.

HULL SURVEYOR		APPROVED BY:	HI REPORT NO.: HS110443
FRED WALTERS	PH 427-1490	PHONE:	REVISION: 0
SURVEY DATE:	14 NOV 2011		SURVEY SHEET NO.: 1
EXPIRY DATE:	N/A		PAGE 11 OF 13

HULL SURVEY SHEET FOR		DISTRIBUTION LIST	
HMCS Preserver		CDTL - original copy	
COMPONENT STRUCTURE		ENG/NAO/Hull Survey Office - file copy	
		LOCATION	FORE PEAK
		Fore Peak - FR10	01, 1
		FRAME	DECK
			STBD SIDE
JUSTIFICATION FOR SURVEY			
1. Survey and prepare repair instructions for damage to bow.			
REF: FMFCS Job No. 820161471		REF DWG NO.: 509-H26-21228, 509-H26-21234, 509-H26-21237	
DESCRIPTION OF WORK REQUIRED			

12. A second hull survey report is required when resources are made available to determine the extent of repairs required to shell plate in shear strake area (at 01 Deck) forward of Frame 10 Stbd side and at 1 Deck at Frame E where shell plate is holed. The following are initial observations in this area:
- The side shell plating on Starboard side forward of Frame 10 is exhibiting signs of damage where contact occurred.
 - The side shell plating on Stbd side, below 1 deck at Frame E is holed.
 - Shell plate to Side Frame attachment weld located just below 01 Deck, STBD at Frames E and Frame F is exhibiting fractures and frame distortion. Renew top sections of both frames from 01 Deck level to approximately 16" below. Insert in shell plating and deck plating also required in this area.
 - For estimation purposes the following materials will be required:
 - 2 sheets of 8'X20' x 0.43" - CSA G40.21-M 260WT Cat 5 (21J @ -40 deg. C)
 - 1 sheet of 8' x 20' x 0.50" - CSA G40.21-M 260WT Cat 5 (21J @ -40 deg. C)
 - 1 pc 20' length of 7" x 4" x 3/8" IA angle
13. Forward bow plating just below one deck, Stbd side below 01 Deck electrical glands, exhibits heavy corrosion on interior. The bow shell plate forward of Frame K, both Port and Starboard section is to be cleaned to bare metal to SSPC SP11 with a minimum of 20 locations (10 per side) prepared for ultrasonic thickness readings to determine remaining plate thickness. Final UT thickness readings report is to be forwarded to Hull Survey office, and if plate thicknesses are below acceptable tolerances, additional repairs will be required and provided on a separate hull survey report.
- * This may result in an addition to the shell plate insert and delay installation of bulwark plating.
14. For all weld repairs including deck inserts, shell inserts, and deck structure, NDE examination of all welds to be conducted no sooner than 24hrs after weld completion, with a copy of the NDE report being forwarded to Hull survey office.
15. Welding and NDE is to be IAW CFTO D-49-003-003/SF-001.
16. All areas IWO repairs are to be certified safe for hot work.

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EXPIRY DATE:	N/A		PAGE 12 OF 13

HULL SURVEY SHEET FOR		DISTRIBUTION LIST	
HMCS Preserver		CDTL - original copy	
COMPONENT STRUCTURE		ENG/NAO/Hull Survey Office - file copy	
		LOCATION	FORE PEAK
		Fore Peak - FR10	01, 1
		FRAME	DECK
			STBD SIDE
JUSTIFICATION FOR SURVEY			
1. Survey and prepare repair instructions for damage to bow.			
REF: FMFCS Job No. 820161471		REF DWG NO.: 509-H26-21228, 509-H26-21234, 509-H26-21237	
DESCRIPTION OF WORK REQUIRED			

17. Necessary staging to be supplied by Repair Facility.
18. Removals required to facilitate repairs are to be at the discretion of the RF. The Hull Surveying office is to be consulted if the removal of any primary or secondary structure in the bow section below 01 deck is required, prior to commencement of removing items.
Removals:
 - a. release the upper de-gauzing cabling, and releasing the cable trays in bos'n workshop
 - b. possibly release sections of pre wet piping systems located immediately below 01 deck. The reinstalls are to be in conjunction with repairs to this system.
19. All sections of shell plate/structure and deck head/structure in way of hot work (repair areas) shall be cleaned to bare metal, SSPC SP11 and upon completion, a structural survey of these areas shall be conducted by a Hull Surveyor. All other substrate exposed due to insulation removed to conduct survey, shall be cleaned to SSPC SP1, followed by cleaning to SSPC SP3 in preparation of applying two (2) coats of C212 (International Paint - Interprime 234 or equivalent, 40-60 microns DFT per coat)). Any additional defects found at this time shall be raised as item of additional work and reported in a separate Hull Survey report.
20. New and disturbed insulation is to be treated IAW CFTO C-03-011-007/MS-002, Insulation manual for HMC Ships. Approximately 1500 sq. ft of insulation removals have been conducted to allow hull survey to be conducted.
21. All new and disturbed paint coatings shall be applied in accordance with D-23-003-005/SF-002 and the Manufacture's Product Data sheets. Any conflict between this specification and the Manufacture's Instructions shall be brought to the attention of the Hull Surveyors' office for resolution.
22. All repair work to be conducted in conjunction with neighboring and surrounding repair items to facilitate efficiency in the overall total repair.
23. RF Shop to determine and proceed in a logical order of repair items identified in this hull survey to suit best shop practices considering availability of materials and resources available, thus avoiding any duplication of effort.
24. Ship side shell plate inserts and side frame repairs have not been captured in this hull survey report.

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